



Brownfields — Pollution Prevention and Waste Minimization

Outreach and Special Projects Staff (5101)

Quick Reference Fact Sheet

EPA's Brownfields Economic Redevelopment Initiative is designed to empower States, communities, and other stakeholders in economic redevelopment to work together in a timely manner to prevent, assess, safely clean up, and sustainably reuse brownfields. A brownfield is a site, or portion thereof, that has actual or perceived contamination and an active potential for redevelopment or reuse. EPA's Brownfields Initiative strategies include funding pilot programs and other research efforts, clarifying liability issues, entering into partnerships, conducting outreach activities, developing job training programs, and addressing environmental justice concerns.

OVERVIEW

The Brownfields Initiative is designed primarily to help communities return brownfields to productive use once they have been cleaned up. Beyond this initial objective, however, is the commitment to preventing these sites from becoming environmental and health hazards in the future and to support them in becoming models for sustainable redevelopment. Pollution prevention and waste minimization are key strategies the Brownfields Initiative supports to meet these long-term objectives.

Pollution prevention, also known as source reduction, means reducing or eliminating the amount of any hazardous substance, pollutant, or contaminant entering the environment. In other words, the environmental impact of waste can be lessened by not creating it in the first place. Opportunities for pollution prevention exist through technology or equipment changes, product redesign, substitution of raw materials, and improvements in routine maintenance. Recycling is another important waste minimization method to reuse valuable materials and reduce waste destined for disposal.

ACTIONS

Pollution prevention and waste minimization can reduce the health and environmental impacts of new development at a brownfields site— whether industrial, commercial, or residential. Source reduction

and recycling can be achieved within industrial settings by: changing processes to use fewer toxic chemicals; substituting hazardous raw materials with non-hazardous materials; practicing proper maintenance and housekeeping to eliminate spills and leaks; and modifying equipment to enhance in-line material recovery or recycling options. In transportation, “clean” fuels can be developed to reduce pollution, more efficient transportation practices can be employed, or transportation needs can be reduced. In commercial settings, waste can be reduced by using energy-efficient appliances and lighting, installing water-efficient equipment, purchasing recycled and recyclable materials, and working with suppliers to reduce the amount of packaging. At home, citizens can recycle and reuse, buy products with less packaging, and reduce the use of household chemicals.

EPA encourages source reduction and recycling activities, and, through its voluntary pollution prevention programs, can provide information and other incentives to businesses and communities who would like to adopt source reduction and recycling practices. Several of the voluntary programs can provide pollution prevention information relevant to redeveloping brownfield sites.

Climate Wise encourages the reduction of energy use and greenhouse gas emissions. The program helps businesses by demonstrating the economic and productivity gains associated with “lean and clean” management and thereby changing the way companies

view and manage for environmental performance; and by allowing participants to identify the actions that make the most sense for their organization and thereby fostering innovation. Climate Wise companies save money, receive technical assistance and support for identifying financing options, meet and work with other leading industries and select service providers, and receive public recognition for environmental leadership and performance.

Design for the Environment helps businesses incorporate environmental considerations into the design and redesign of products, processes, and technical and management systems. Some of their current projects include: *environmental accounting*, which helps businesses to understand the full spectrum of their environmental costs and to incorporate these costs into decision-making; *curriculum development* through the University of Michigan; the *Green Chemistry program* which works collaboratively with chemists in academia, industry, and government to encourage the design and redesign of chemical products and processes so as to minimize impacts on human health and the environment; and working with the *insurance* industry to incorporate pollution prevention activities into daily operations in exchange for reduced insurance premiums.

Energy Star Buildings seeks to maximize energy efficiency and profits in commercial and industrial buildings while reducing atmospheric pollution by encouraging and providing technical assistance related to energy-efficient lighting, building tune-ups, HVAC load reductions, improved fans and air-handling systems, and improved heating and cooling.

Energy Star Residential Programs works with home builders to build energy-efficient new homes and works with utility companies and suppliers to encourage production of more energy-efficient home products such as furnaces, air conditioners, and thermostats. In addition, a variety of financing options are linked to Energy Star Homes.

Green Lights Program encourages and provides technical assistance to institutions to use energy-efficient lighting.

Indoor Environments Program uses the best science available to develop and disseminate information,

guidance, and solution-based technologies to ensure that the air quality in all indoor environments will protect and promote human health and welfare. In addition to seeking reductions to radon and tobacco smoke, the Indoor Environments Program also works with manufacturers to reduce indoor air emissions of their products.

Pesticide Environmental Stewardship Program reduces risk by providing technical assistance, recognition, and other information to those seeking to reduce agricultural and non-agricultural use of pesticides. Use of pesticides in homes, office buildings, and other non-agricultural uses account for one-quarter of all pesticides currently used in the U.S.

Transportation Partners Program works with and provides technical assistance to local governments and citizens' organizations to reduce carbon dioxide emissions from the transportation sector by reducing vehicle miles travelled. It also promotes telecommuting, transit- and pedestrian-oriented community design, and market-based reforms.

Water Alliances for Voluntary Efficiency currently works with and provides technical assistance to hotels and lodging associations to promote water and energy efficiency, and plans to expand to involve schools and office buildings in the future.

WasteWi\$e works with a variety of industrial and service companies and organizations and provides technical assistance to reduce generation of municipal solid waste and thereby conserve energy and natural resources. Companies participate by reducing the waste they generate, collecting recyclables, and increasing the manufacture or purchase of recycled products.

Whether brownfields are reused industrially, commercially, or residentially, reducing pollution before it is created will ensure that sites cleaned up today remain that way in the future.

CONTACT

For more information on pollution prevention and waste minimization and how they can support sustainable reuse of brownfields sites, please contact the RCRA/Superfund Hotline at (800) 424-9346.